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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,850	05/17/2007	Thomas Schlosser	294077US0PCT	1996
22850	7590	03/19/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
SCOTT, ANGELA C				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
03/19/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/588,850

**Applicant(s)**

SCHLOSSER ET AL.

**Examiner**

Angela C. Scott

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,9,10,12,13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,12,13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/04/2008.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Applicant's response of December 10, 2008 has been fully considered. Claims 3, 6, 7, and 9 have been amended and claims 15-21 have been added. Claims 1-7, 9, 10, 12, 13 and 15-21 are pending.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737).

Regarding claims 1, 2, 4, 5, 18 and 21, Roberts et al. teaches a filled polyolefin compound (Col. 4, line 7) comprising a polypropylene base polymer (Col. 4, lines 52-67), a maleic-anhydride-modified polypropylene (Col. 8, lines 20-30 and Col. 6, lines 40-50), a filler such as aluminum hydroxide or magnesium hydroxide (Col. 4, lines 34-51), a polydiorganosiloxane containing at least one polar moiety with all other substituents being methyl groups (Col. 10, lines 1-50, specifically lines 39-43) (corresponds to Formula IV), and other additives such as stabilizers and processing aids (Col. 11, lines 15-20). Roberts et al. further teaches that with respect to the polar moiety, amino moieties are preferred for improving thermoplastic resin processing (Col. 10, lines 49-50).

Roberts et al. does not teach that the amino moiety is an aminopropyl group, i.e., connected to the silicon by a three carbon long chain. However, Ishizaka et al. teaches silicone compositions

comprising siloxanes substituted with amino groups where the amino group is preferably bonded to the silicon atom by at least 3 carbon atoms (Col. 2, lines 50-55). Roberts et al. and Ishizaka et al. are analogous art because they are from the same field of endeavor, namely that of silicone containing surface treatments. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use a propyl group, as taught by Ishizaka et al., to connect the amino group to the silicon atom in the polydiorganosiloxane, as taught by Roberts et al., and would have been motivated to do so for stability during storage (Col. 2, line 51).

Regarding claim 3, Roberts et al. teaches that the maleic anhydride grafted polypropylene is used in a content of 5% of the total compound (Table 1).

Regarding claim 6, Roberts et al. teaches that the filler is used in an amount of about 1 to about 100 parts by weight based on the total weight of polyolefin (Col. 4, lines 35-41).

Regarding claim 7, Roberts et al. teaches that the organo-modified polysiloxane is used in an amount of from about 0.01 to about 1.0 percent by weight based upon the total weight of the final polymeric material (Col. 4, lines 25-30).

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737) as applied to claim 2 above, and further in view of Schlosser et al. (US 2003/0134969) and Kaprinidis (US 2003/0220422).

Roberts et al. and Ishizaka et al. teach the composition as described above. Roberts et al. also teaches mixing all of the compound ingredients together in a suitable mixer, such as an extruder, and making a melt (Col. 11, lines 3-9).

Roberts et al. does not teach heating the mixing assembly. However, Schlosser et al. does teach making filled cable compounds and heating the mixture to a temperature above the melting point of the base polymer (§60). Roberts et al. and Schlosser et al. are combinable because they are from the same field of endeavor, namely that of filled polyolefin compounds. At the time of the invention, a person of ordinary skill in the art would have found it obvious to heat the compound during mixing, as taught by Schlosser et al., as part of the process in making the composition, as taught by Roberts et al., and would have been motivated to do so because heating the mixture to above the melting point of the base polymer helps with thorough mixing of the components.

Roberts et al. does not teach that the compound is formed into pellets. However, Kaprinidis does teach making polypropylene compounds and forming them into pellets after mixing (§413). Roberts et al. and Kaprinidis are combinable because they are from the same field of endeavor, namely that of flame retardant polypropylene compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to form the finished compound into pellets, as taught by Kaprinidis, and would have been motivated to do so because the pellets can then be processed into many useful articles through a variety of methods (§413).

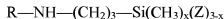
Moreover, at the time of the invention, it would have been obvious to one of ordinary skill in the art to combine Roberts et al., Schlosser et al., and Kaprinidis because they are all from the same field of endeavor, namely that of flame retardant and filled polyolefin compositions.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737) as applied to claim 1 above, and further in view of Chaillie et al. (DE 195 42 157). For convenience, the citations below are taken from an English language machine translation of Chaillie et al., included herewith.

Roberts et al. and Ishizaka et al. teach the composition of claim 1. Roberts et al. does not teach that the compound can be used for cables, which are also polyolefin moldings. However, Chaillie et al. does teach a polymer based mixture of maleic acid anhydride grafted polyethylene and silicone oil that is used for cables (Example I and Page 1, lines 4-5). Roberts et al. and Chaillie et al. are combinable because they are from the same field of endeavor, namely that of filled polyethylene or polypropylene compounds. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the composition, as taught by Roberts et al., to make cables, as taught by Chaillie et al., and would have been motivated to do so because the compounds of the references are similar and it is advantageous to make cables from a flame-retardant compound.

Claims 15-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737) as applied to claim 1 above, and further in view of Mack et al. (US 6,500,883).

Roberts et al. and Ishizaka et al. teach the basic composition of claim 1. However, Roberts et al. does not teach that the composition contains silicon compounds described as a), b), c), e) and f). However, Mack et al. teaches filled compositions containing one of three groupings of organosiloxane compounds. Group one is an amino-functional silicon compound of the general formula



in which the groups Z are identical or different and Z is an alkoxy group having from 1 to 3 carbon atoms, x is 0 or 1, and R is a linear or branched alkyl group having from 1 to 20 carbon atoms (Col. 3, lines 1-10) or a bisaminosilane, preferably of the formula  $[(\text{H}_5\text{C}_2\text{O})_3\text{Si}(\text{CH}_2)_3\text{NH}(\text{CH}_2)_3\text{Si}(\text{OC}_2\text{H}_5)_3]$  (Col. 3, lines 14-16). These compounds correspond to b) in the instant claim 1 and claim 16 and c) in the instant claim 1 and claim 17. Group two comprises an amino-functional silicon compound of the general formula



in which the groups Z are identical or different and Z is an alkoxy group having from 1 to 3 carbon atoms, x is 0 or 1 and R is an amino group of the formula  $\text{H}_2\text{N—}[(\text{CH}_2)_2\text{NH}]_y(\text{CH}_2)_3$ , where y is 0, 1, or 2 (Col. 3, lines 25-35) and an alkenyl functional silicon compound (a vinyl silane) (Col. 3, lines 50-55). This combination corresponds to f) in the instant claim 1 and claim 20, as well as a) in claim 1 and claim 15. Additionally, when one of these amino-functional silicon compounds is added the composition, combination e) of instant claim 1 and claim 19 is obtained.

Roberts et al. and Mack et al. are analogous art because they are from the same field of endeavor, namely that of filled compositions containing functional silicon compounds. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the above amino functionalized silicon compound, as taught by Mack et al., in the composition, as taught by Roberts et al., and would have been motivated to do so because they provide good strength properties with good impact resistance properties (Col. 2, lines 39-40).

### ***Response to Arguments***

Applicant's arguments, see pages 11-13, filed December 10, 2008, with respect to the rejection(s) of claim(s) 1-7 under 35 U.S.C. 102(b) and claims 9, 10, 12, and 13 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been

withdrawn. However, upon further consideration, a new ground(s) of rejection is made for claims 1-7, 18 and 21 under 35 U.S.C. 103(a) over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737), for claims 9-10 under 35 U.S.C. 103(a) over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737) and further in view of Schlosser et al. (US 2003/0134969) and Kaprinidis (US 2003/0220422), for claims 12 and 13 under 35 U.S.C. 103(a) over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737) and further in view of Chaillie et al. (DE 195 42 157), and for claims 15-17 and 19-20 under 35 U.S.C. 103(a) over Roberts et al. (US 6,288,144) in view of Ishizaka et al. (US 4,311,737) and further in view of Mack et al. (US 6,500,883).

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 270-3303. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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